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HANDBOOK OF
Physical Training and Games
For Elementary Schools with
GYMNASIUMS & PLAYROOMS
Philadelphia Public Schools

M. G. BRUMBAUGH PH.D., LL.D.
SUPERINTENDENT OF SCHOOLS

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No. 1.

PHYSICAL TRAINING IN ELEMENTARY SCHOOLS.

The Objects of Physical Training.

Gymnastics, or physical training, is the regulated and supervised practice of muscular exercises under conditions that tend (1) to promote the health of the pupils, insure normal growth, and (2) to develop and discipline motor control.

The aims of this training, therefore, are twofold, namely: hygienic and educational; health-producing and habit-producing.

Viewed as to its physical effects, gymnastics produces health and hardiness. By combating and alleviating unhygienic school conditions, like impure air, improper sitting and standing, long periods of physical inactivity, it increases health. It cultivates and develops strength and it increases organic vigor. By increasing co-ordination it promotes quickness and skill. It cultivates endurance, and it strives for beauty of form. By its combination of strength and co-ordination it produces beauty of motion; *i. e.*, grace.

Viewed as to its educational, habit-producing effects, school gymnastics promotes obedience, exactness and order. It trains for alertness, quick perception and quick reaction. It strengthens the will power. It awakens an appreciation of the beautiful in form and motion. In its competitive forms it leads to self-control, self-denial, loyalty to leaders, and it awakens and promotes morality.

THE KIND OF WORK.

A. Relief Work.

There are two phases to physical training work. One phase deals with the real constructive, body-building work; the other might be termed "relief work." This relief work may be done in the classroom, while the constructive work should be performed either outdoors, in suitable exercise rooms, or in gymnasiums.

The relief work should be conducted by the regular teacher of each class. It consists of exercises designed to counteract the detrimental effects of ordinary school life. These exercises should be performed at least twice daily in the classroom at 10 A. M. and at 2.30 P. M., or some other suitable time selected by the principal. Each period lasts from two to three minutes, (see pages 40 and 41).

B. Physical Training Work.

The regular physical training work consists of selected exercises graded to meet the physical and mental needs of the growing child. In the primary grades; *i. e.*, school grades 1 to 4, the exercises are conducted by the regular teacher of each class.

In the grades above the primary the exercises are conducted by qualified teachers, selected for this work by the principal.

Each class has two physical training lessons per week, each lesson lasting thirty minutes. It is hoped, eventually, to have one lesson per day. Should there be unassigned periods, principals strongly are advised to devote some of these to a constructive health measure like physical training.

VIEWPOINTS GUIDING THE SELECTION OF MATERIAL FOR THE DIFFERENT AGE-GROUPS.

The following arrangement is based principally upon that used by Dr. Ferdinand A. Schmidt, professor in Bonn, Germany, in his book on the "Physiology of Exercise." The ideas expressed there have profoundly influenced the arrangement as well as the selection of material in this handbook.

FUNDAMENTAL CONSIDERATIONS.

First Book, A—For Pupils 6, 7, 8, 9 Years of Age.

School Grades 1 and 2.

Excepting the kindergarten, this is the first period of school work. So far as its effect upon health is concerned, for the average child it means a change from a free active life to one requiring not only a considerable amount of sitting, but also decreased muscular activity; *i. e.*, to conditions interfering with sound growth.

The result is a decreased incentive for lung growth, and a decreased circulation of blood and lymph.

The essential viewpoints in the choice of gymnastic material for this period, therefore, must be:

(a) To select exercises that quickly increase metabolism, and that induce a healthy normal growth.

(b) To select exercises that directly counteract the detrimental effects upon health which the habituation to school life brings to the child.

During this period, especially at its beginning, a child is still too weak and undeveloped to perform exercises designed primarily to greatly increase muscular strength, or to develop special sets of muscles. It is, however, most important to select exercises that actively engage large muscle masses, and which at the same time stimulate respiration and circulation. The activities employed for these ends should be mainly plays and games, as they create largely feelings of joy, and give opportunity for spontaneous action of the will power. At appropriate times, and especially when bad weather makes it impossible to exercise in the open air, the gymnastic lesson should consist of exercises for increasing good posture, of vigorous trunk exercises, of marching and of steps. Where it is possible it should be the rule that gymnastics must be performed out of doors. No indoor exercises, however valuable, can be compared in their effect upon blood enrichment to the value of these same exercises when performed out of doors in the sunlight.

During this first school period the teacher begins to discover that some pupils are of slow mentality. For the mental stimulation of these pupils simple gymnastic games and the song games, with arm or leg movements, are very valuable. If children are of the extremely nervous type their gymnastic work should consist mainly of rhythmic exercises (not of exercises performed only upon command). Exercising with properly selected music, also, is very valuable in such cases.

The fundamental ideas, in selecting gymnastic material for this age group, are: large movements employing the large muscle masses; predominantly spontaneous and rhythmic work; much self-activity in the games and plays.

First Book, B—For Pupils 8, 9, 10, 11 Years of Age.

School Grades 3 and 4.

The general viewpoints determining the selection and the character of physical training work for the first school period are still the predominant ones for the second period. Exercises of skill are a most important factor. The games, however, should now demand greater co-ordination, quickness and readiness. During this period children begin to be interested in team games of low organization.

In track and field work, fast running (sprinting) from 50 yards gradually leading up to 75 yards (at the end of this period) should have a prominent place. Endurance (slow) running should progress from 4 to 6 minutes. Broad and high jumping should be practiced. At the end of this period the fundamental swimming strokes should be taught. Ice and roller skating should be encouraged.

In apparatus work easy exercises of agility, mainly in the hang, and in hang-lying, should receive careful attention.

The essentials to be demanded in the gymnastic lessons are:

- (a) Good posture in standing and marching.
- (b) Vigorous trunk exercises combined with simple arm and leg movements.
- (c) Elementary steps in alternation with marching, also simple combinations of leg and arm movements.

Second Book, A—For Pupils 10, 11, 12, 13 Years of age.

School Grades 5 and 6.

During the last years of this period girls arrive at puberty. The viewpoints regarding the selection of work remain as before, but much greater demands can be made upon skill, upon more difficult co-ordinations.

The games of boys are characterized by a fighting, antagonistic spirit; games requiring increased skill, daring, courage, appeal strongly to this age group.

The track and field work should consist of sprinting up to 100 yards, and endurance runs from 6 to 8 minutes. Broad and high jumping, also the triple standing jump, and the hop, step and jump should be practiced. The more advanced swimming strokes, also greater skill in skating, should be encouraged.

In apparatus work exercises in the hang and in the support-stand may be of medium difficulty designed primarily for increasing skill; also for increasing the strength of the arms and the abdominal muscles.

The essentials demanded in the gymnastic lesson are:

- (a) Good posture.
- (b) Free exercises of a medium degree of difficulty performed with energy and precision.
- (c) Steps of medium difficulty executed with good finish.

Second Book, B—For Pupils 12, 13, 14, 15 Years of Age.

School Grades 7 and 8.

A characteristic of this age is an increased rapidity of the growth of lungs and heart.

Games demanding much running should give to these vital organs the stimulus they need for increased activity. Team games of increasing complexity, but requiring no great endurance, are ideal forms of exercise at this age.

Track and field work should consist of sprinting up to 150 yards, and of endurance runs from 8 to 10 minutes. To the jumping of the former periods should be added low hurdling and pole vaulting. Boys and girls at the end of this period should easily swim one hour, and know the different swimming strokes. In skating, also, they should be adepts. Tramping from 5 to 10 miles is of great value and should be encouraged.

In apparatus work exercises in the hang should require more skill. Momentary support should alternate with mounts, dismounts and vaults. For girls exercises designed to strengthen the muscles of the back and abdomen should predominate.

During the whole lesson both in free exercises and in apparatus work the demands upon the skill, agility and strength of the pupils should be increased. Boys especially should have exercises demanding resoluteness, daring and courage.

Up to a short time before puberty there need be no great difference between the exercises for both sexes. With the advent of this change, however, the many valuable exercises in the hang on the ladders, rings, giant strides, etc., offer to the girls the same opportunities for self-activity that the more violent forms of exercise on the bars, buck, etc., offer to boys.

In the physical training work the essentials are :

- (a) Good posture.
- (b) Vigorous trunk exercises.
- (c) The correct co-ordinations demanded by the more advanced steps.

Third Book—For Pupils from 15 to 20 Years.

The High School Group.

This age group, also, might be divided into two periods, A from 15 to 17 years, B from 17 to 20 years.

During the first period puberty arrives for the boys. Beside this great physiologic change, another characteristic of this period is the most rapid growth of lungs and heart. During the years from 14 to 18 the heart practically doubles its size. Based upon the law that appropriate stimulation of an organ when it is growing most rapidly will produce the best results, heart and lungs at this period of a boy's or girl's life should receive much stimulation by means of suitable exercise. The best exercise to stimulate heart growth is running. Games, therefore, and activities that demand much running, but no severe strain, are most valuable forms of exercise.

The viewpoint determining the selection of gymnastic material for girls is the same as in the preceding period.

The games of both girls and boys now should demand the highest forms of skill, but not much endurance. Running games should give the body much encouragement for vigorous growth. In the selection of physical training material one thing always must be kept in mind; *i. e.*, the body must never be deprived of the material it needs for growth by participation in men's games, or in activities demanding great endurance. Marathon races of all kinds on land or water, as well as football games played according to rules designed for adults should not be permitted if the growing youth is expected to develop into vigorous manhood or womanhood.

Track and field work should consist of fast running up to 220 yards; cross-country runs (no speed) up to 30 minutes are permissible. Throwing and putting should be added to the field events of the preceding periods, while swimming, skating, tramping, rowing and other natural forms of exercise should receive full recognition.

In apparatus work, especially for boys, exercises in the support and vaulting should now receive attention, while for both sexes the exercises of skill performed in the hang may be increased. Suitable apparatus work is of special benefit to the high-school girl in giving her a training for courage and determination and an impetus to develop initiative which modern life makes increasingly necessary for girls. As creators of "joy in achievement" the stunts possible on suitable apparatus are factors of no small importance in guiding a girl's life into proper channels.

During the whole physical training work in the high-school period the tendency to select forms of exercise that develop initiative and individuality should predominate. That part of the lesson devoted to free exercises, therefore, should be short and be filled with vigorous physical work demanding not too much concentration. Its characteristics should be:

(a) A sustained effort to increase good posture.

(b) Vigorous trunk exercises, made more valuable and interesting by the frequent use of suitable hand apparatus.

(c) Steps demanding (especially for girls) difficult co-ordinations.

During the second period of this age group, 17 to 20 years, the young man is gradually nearing maturity. As a rule height has reached its maximum and breadth begins its development.

His games may now demand a medium amount of endurance. With boys the musculature now is becoming strong enough to allow the gradual introduction of strength exercises like wrestling, putting the 16-pound shot, putting up of medium-weight dumbbells, and the countless forms of exercises upon apparatus.

If he has received the training outlined above, fast running at all distances and cross-country running up to one hour are permissible. Rowing as a sport may be begun. Training for any one sport should, however, be discouraged. Girls at this age, and later, revel in the highest forms of æsthetic dancing.

With the completion of the twentieth year most men have arrived at maturity. For approximately the next twenty years man can undertake any kind of physical work without this interfering with his bodily development.

Organically healthy women may participate with profit in running short distances, in appropriate forms of throwing, in swimming and in other forms of competition requiring no violent effort.

If, after puberty, it is wise to encourage most women to take part in vigorous athletic competition is more than doubtful. Each case must be decided upon the physical fitness of the participant.

CONTENT AND TIME DIVISION OF A 30-MINUTE LESSON.

(For Relief Work, see pages 40 and 41.)

A complete gymnastic lesson has four parts, with a time value as follows:

PART I—	<i>Free Exercises, preceded by class</i>		
	<i>marching and formation.....</i>	Time	9 minutes
PART II—	<i>Marching and Dance Steps</i>	"	5 minutes
PART III—	<i>Breathing Exercises</i>	"	1 minute
PART IV—	<i>Either Games, or Track and Field</i>		
	<i>Work, or Apparatus Work</i>	"	15 minutes
<hr/>			
Total	Time	30 minutes	

Time Division of Each Part, Also of the Several Units of Each Part.

PART I—*Free Exercises*, divided approximately as follows:

Unit 1. Exercises of the arms and legs used as introductory movements to equalize and increase circulation. These exercises are to be performed only in rhythm. Only such movements should be selected as can be done in a brisk manner.

A. Arm Exercises, 1 minute.

B. Leg Exercises, 1 minute.

Unit 2. Exercises of the trunk used to improved posture and to strengthen the muscles of the trunk.

A. *Bending of the upper trunk backward*, 1 minute; to be done only upon command, never in rhythm.

B. *Bending, lowering and turning*, 5 minutes, to be done first upon command, then in an appropriate slow rhythm.

Unit 3. Balance Exercise, 1 minute; to increase co-ordination and improve posture. These exercises should consist of slow leg, trunk and arm movements.

PART II—*Steps*, divided into exercises performed while marching, running or hopping, and into dancing steps.

A. *Marching Steps*, 1 minute.

B. *Dancing Steps*, 4 minutes.

PART III—*Breathing Exercises*, designed to improve breathing. As a rule they consist simply of deep inhalations and exhalations accompanied by appropriate arm exercises. In this form they always are performed upon command. Bending backward of the upper trunk accompanied by suitable arm exercises increases the effectiveness of such exercises. Furthermore, inhaling and exhaling during a specified number of steps while marching is an effective mode of increasing breathing. This march breathing exercise can be made still more effective by adding appropriate arm movements.

PART IV—*Either Games, or Track and Field Work, or Apparatus Work*.

When track and field work, or apparatus work is included in a lesson a sufficient number of like pieces of apparatus, of jumping facilities, etc., must be provided to allow simultaneous exercise by many pupils. Squads should not contain more than from seven to ten pupils.

Note 1. At appropriate times team games of high organization may take up the whole gymnastic period except the time set apart for free exercises.

Note 2. For a selected list of exercises in Jumping and Hopping see pages 41, 42 and 43.

THE PHYSICAL TRAINING MATERIAL FOR EACH AGE GROUP.

FIRST BOOK, A.

School Grades 1 and 2; Ages 6 to 9 Years.

Tactics.

A. *Moving of the class.* The pupils are arranged in a column of front ranks of two (see Fig. 1), the tallest at the head; march forward. Keeping step is not expected in the first grade. Head and chest up; arms swing naturally.

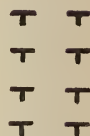


Fig. No. 1

B. *Formation for free exercises.* 1. The last half of the class marches forward and forms at the left of the first half at four steps' distance (see Fig. 2).

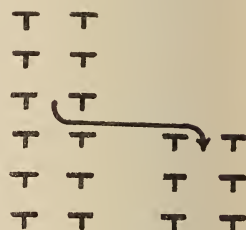


Fig. No. 2

2. Open the ranks (of two) sideward from the center by taking one side step outward (two counts).

3. Close the ranks by taking one side step inward. In marching off the first half of the column leads (see Fig. 3).

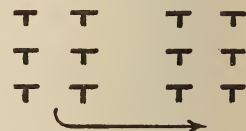


Fig. No. 3

Free Exercises.

The essential exercises of these grades are:

- (a) *Arms:* 1. Raise the straight arms forward, sideward, fore-upward, side-upward.
2. Straighten the arms forward, sideward, upward; the starting position being "arms bent upward."
- (b) *Legs:* 1. Raise the straight leg forward, sideward, backward.
2. Place the foot forward, sideward, backward.
3. Raise one knee forward, raise the heels, bend the knees.

- (c) *Trunk*: 1. Lower the trunk forward.
 2. Bend the trunk forward, sideward, backward (raise the chest).
 3. Turn the trunk.

Co-ordinations (Class Aims) for Grades 1 and 2.

(See, also, note on page 26.)

A. *Two-movement exercises of one body-part*. Simple exercises, mainly rhythmic work.

Examples: Raise the arms forward—1, lower—2; or (hands on hips) bend the trunk left—1, straighten—2; or (hands on shoulders) place the left foot backward—1, replace—2.

B. *Alternation of two easy two-movement exercises* (1) of similar or (2) of dissimilar body-parts.

Example: (1) Similar parts: Raise the arms forward—1, lower—2, raise the arms sideward—3, lower—4.

(2) Dissimilar parts: (Hands on hips) bend the trunk forward—1, straighten—2, place the left foot forward—3, replace—4.

Steps.

A. *Marching steps*. (1) Marching in common time; *i. e.*, 135 steps per minute; in fast time; *i. e.*, 150 to 160 steps per minute, arms swing naturally.

(2) Easy arm and leg movements while marching and running.

B. *Dancing steps*. (See note, page 26.)

(a) Glide; gallop; skip-step.

(b) Triple glide; triple gallop.

(c) Hopping four times left and right; four jump-steps with subsequent quarter turns.

(d) Balance-step sideward.

Games.

(For description see other Handbooks, also "Games and Dances.")

(a) *Action games*; *i. e.*, games complete in themselves (like the gymnastic games) which have a song accompaniment: We all stand here; Drop the handkerchief; Let us chase the squirrel.

(b) *Song games*; *i. e.*, games in which the movement organically is connected with the song, both being necessary to play the game: How d'ye do, my partner; The muffin man; Did you ever see a lassie; The needle's eye; Oats, peas, beans and barley grow; The carrousel; Jolly is the miller; Little sister come with me; Herr Schmidt; I see you; My brother.

(c) *Gymnastic games.* (Games marked R can be played in rooms.)

Cat and Mouse,

What are you doing in my garden?

Hand Tag (R).

Squatting Tag (R).

Skipping Tag (R).

Follow the Leader (R).

Cat and Mouse, in two concentric circles.

Cat and Mouse, with two cats.

Change Tag.

Catch Me.

Spin the Plate, or Catch the Wand (R).

Jacob, Where Are You? (R).

Ball Games.

Bean Bags (R).

(a) Toss up and catch.

(b) Toss to a partner.

(c) Combine a and b.

(d) Teacher.

Toss the bag for height.

Toss through a bagboard (R).

Bag in the Ring (R).

Dodgeball, with one foot in a circle (R).

Bound Ball (R).

Increase the difficulty of the games named above by greater distances; by designating the hand that throws or catches; also by hand clapping once (or oftener) before a bag is caught.

Track and Field Events.

(a) *Fast running*—sprinting—up to 50 yards.

(b) *Endurance running* from 2 to 3 minutes. Pupils suffering from short breath or pain in the side step out of line without further comment. As soon as breathing is normal they again step into line.

(c) *Standing broad jump.* Pupils in the first and second grade simply make playful attempts in broad jumping.

Apparatus Work.

(See note, page 28.)

The apparatus used consists of Horizontal Ladders, Swinging Rings, Balance Beams, Stall Bars, and the Long Jumping Rope.

(a) Simple exercises in the hang-stand and in the hang.

(b) Walking on the low beam.

(c) Running through the jumping rope.

FIRST BOOK, B.

School Grades 3 and 4; Ages 8 to 11 Years.

Tactics.

A. *Moving the class.* The pupils are arranged in a column of front ranks of twos, the tallest at the head. March forward. At a given corner successively form fours (see Fig. 4). Head and chest up. Arms swing naturally.

B. *Formation for free exercises.* Open the ranks (of four) sideward from the center, 2 steps distance, in succession (6 counts); the even files then 1 step forward (2 counts). (See Fig. 5.)

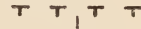
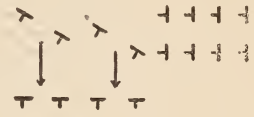


Fig No. 4

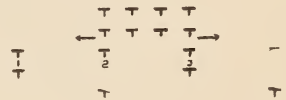


Fig. No. 5

Free Exercises.

The essential exercises of these grades are:

- (a) *Arms:*
 - 1. Raise the straight arms forward, sideward, fore-upward, side-upward.
 - 2. Straighten and thrust the arms forward, sideward, upward and downward, the starting positions being: "Arms bent upward," "Hands on hips," "Arms bent to thrust."
 - 3. Circle arms forward and backward. Swimming movements (Grade 4).
- (b) *Legs:*
 - 1. Raise the straight leg forward, sideward, backward.
 - 2. Place the foot forward, sideward, backward; stride; lunge.
 - 3. Raise the knee forward; raise the foot backward; raise the heels; bend the knees; swimming movements (Grade 4).
- (c) *Trunk:*
 - 1. Lower the trunk forward.
 - 2. Bend the trunk forward, sideward, backward.
 - 3. Turn the trunk.

New Co-ordinations (Class Aims) for Grades 3 and 4.

(See, also, note on page 26.)

Repeat Previous Co-ordinations.

A. *Four-movement exercises of the arms.*

Examples: Raise the arms sideward—1, raise upward—2, lower sideward—3, lower downward—4; or (hands on hips) straighten the arms forward—1, move them sideward—2, move forward—3, replace hands on hips—4.

B. *Simple intersected exercises*, consisting of two two-movement exercises of two body-parts arranged as a four-movement sequence.

Example: (Hands on hips) stride left forward—1, lower the trunk forward—2, raise the trunk—3, replace the foot—4; or (arms at sides) swing the arms fore-upward—1, lunge left sideward—2, replace the foot—3, lower the arms—4.

C. *Two-part combined exercises* (two parts of the body moving together).

Example: Raise the arms sideward and bend the knees—1, return—2; or (arms bent upward) bend the trunk fore-downward and straighten the arms downward—1, return—2.

D. *Alternations* of two two-part combined exercises.

Example: Place the left foot backward and raise the arms sideward—1, return—2, lunge left forward and raise the arms sideward—3, return—4.

E. *Three-part combined exercises* (three parts of the body).

Example: Lunge left forward, lower the trunk forward and raise the arms sideward—1, return—2; or (hands on hips) lunge left sideward, bend trunk left and straighten the right arm upward—1, return—2.

Steps.

A. *Marching steps.*

(1) Marching in common time and in fast time, arms swing naturally.

(2) Leg movements while marching and running: *e. g.*, on toes, raising the knees, raising the straight leg forward.

(3) Two-movement arm exercises, four steps to each movement.

B. *Dancing steps* (see note, page 26).

(a) Step-hop; glide-hop; change-step; skip change-step.

(b) Double step-hop; double glide-hop.

(c) Triple step-hop; triple glide-hop.

(d) Balance-step forward, backward; step and courtesy in 2 measures.

Games.

(For description see other Handbooks, also, "Games and Dances.")

(a) *Gymnastic games.* All the games of Grades 1 and 2 may be played.

Potato Race, planting and picking.

Third Tag and Run.

Pussy Wants a Corner.

The Beetle is Out.

Fox and Chickens.

Pass the Bean Bag (Bag Relay).

Day and Night.

Bogey Man (Black Man).

Break through (Bear in the Ring).

Last Pair Run.

Lame Goose.

Catch the Wand (or Spin the Plate), (R).

Ball Games.

Play the ball games of the preceding grades with a large gas ball, a soft baseball, a tennis ball or a basket ball.

Duckstone (with bean bags), (R).

Guess Who? (R).

Throw at a bell, or through a hoop (R).

Throw a ball for height and distance.

Toss and catch a tennis ball.

Toss up (name the catcher).

(b) *Team games of low organization:* Potato race as a team game; running and hopping races in teams; dodgeball in a circle; endball.

(c) *Boys' wrestling games:* Foot in the ring; wrestle for the wand; pull and push over the line; leap frog.

Track and Field Events.

Note. The figures in parentheses under each year show what the best pupils of this age can accomplish.

(a) *Fast running*—sprinting—(up to 75 yards).

Minimum requirements: 50 yards. Time in seconds.

	8 yrs.	9 yrs.	10 yrs.	11 yrs.	12 yrs.
Boys	9 (8 4/5)	8 4/5 (8 3/5)	8 2/5 (8 1/5)	8 1/5 (8)	8 (7 3/5)
Girls	9 2/5 (9)	9 1/5 (8 4/5)	8 4/5 (8 2/5)	8 3/5 (8 1/5)	8 2/5 (8)

(b) *Endurance running* from 4 to 6 minutes. Pupils suffering from short breath or pain in the side step out of line without further comment. As soon as breathing is normal they again step into line.

(c) *Jumping.*

Minimum requirements in feet and inches.

Standing Broad Jump.

	8 yrs.	9 yrs.	10 yrs.	11 yrs.	12 yrs.
Boys	3.4 (4.4)	3.8 (4.10)	4 (5.4)	4.3 (5.10)	4.6 (6.3)
Girls	3 (4.4)	3.1 (4.6)	3.3 (4.9)	3.6 (5)	3.8 (5.3)

Running Broad Jump.

	8 yrs.	9 yrs.	10 yrs.	11 yrs.	12 yrs.
Boys	6 (6.9)	6.6 (7)	7 (7.6)	8.3 (9.1)	9.6 (10.8)
Girls	5.5 (6)	5.6 (6.2)	5.10 (6.8)	6.6 (7.8)	7.2 (8.4)

Running High Jump.

	8 yrs.	9 yrs.	10 yrs.	11 yrs.	12 yrs.
Boys	2.2 (2.8)	2.5 (2.10)	2.8 (3.2)	2.11 (3.4)	3.1 (3.6)
Girls	2.2 (2.6)	2.5 (2.8)	2.8 (2.10)	2.9 (3)	2.10 (3.2)

Swimming. Pupils at the end of their fourth school year should learn to swim. Arrange to have your pupils enter one of the special classes conducted for the teaching of swimming.

Skating. Encourage your pupils to learn the elementary steps.

Apparatus Work.

(See note, page 28.)

Horizontal Ladders, Swinging Rings, Balance Beams, Stall Bars, Long Jumping Rope.

(a) Simple exercises in the hang for increasing skill. Exercise in the hang-stand, support-stand and hang-lying.

(b) Walking and leg exercises on the beam.

(c) Running through and simple jumping in the rope.

SECOND BOOK, A.

School Grades 5 and 6; Ages 10 to 13 Years.

Tactics.

A. *Moving the class.* The pupils are arranged in a column of front ranks of twos, the tallest at the head; alternately march and run forward. At a given corner successively form fours (see Fig. 6). In the Sixth Grade this forming is to be performed in running as well as in marching. Run in place. Halt.

B. *Formation for free exercises.* Open the ranks from the center, two steps distance, by marching forward in succession (4 counts); the even files then one step forward (2 counts—6 counts in all). (See Fig. 7.)

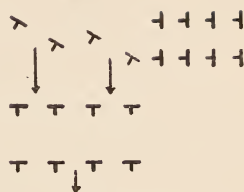


Fig No. 6

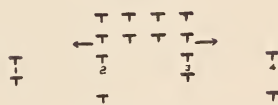


Fig. No. 7

Free Exercises.

The essential exercises of these grades are:

- (a) *Arms:*
 1. Raise the straight arms in all directions.
 2. Straighten, thrust and strike forward, side-ward, upward and downward, the starting positions being: "Arms bent upward," "Arms bent to thrust" and "Arms bent to strike."
 3. Circle arms forward, backward, inward, out-ward.
- (b) *Legs:*
 1. Raise the straight leg in all directions.
 2. Place the foot in all directions; stride, lunge.
 3. Raise the knee, foot and heel; bend the knees.
- (c) *Trunk:*
 1. Lower the trunk forward.
 2. Bend the trunk in all directions.
 3. Turn the trunk.

New Co-ordinations (Class Aims) for Grades 5 and 6.

(See, also, note page 26.)

Repeat Previous Co-ordinations.

A. *Combined intersected exercises of two body-parts.* In this co-ordination (1) the first movement may be of two body-parts, while the second is of one body-part.

Example: (Hands on hips) lunge left sideward and bend the trunk left—1, straighten the right arm upward—2, replace the hand—3, straighten the trunk and replace the foot—4.

Or (2) the first movement may be of one body-part, while the second is of two body-parts.

Example: (Hands on hips) lunge left sideward—1, bend the trunk left and straighten the right arm upward—2, straighten the trunk and replace the hand—3, replace the foot—4.

Or (3) both the first and the second movement may be of two body-parts.

Example: Lunge obliquely left forward and swing the arms fore-upward—1, bend the trunk obliquely fore-downward and swing the arms fore-downward—2, reverse the second movement—3, return to the starting position—4.

Steps.

A. *Marching Steps.*

(1) Marching in common time; *i. e.*, 135 steps per minute; in fast time; *i. e.*, 150 to 160 steps per minute. Arms swing naturally.

(2) Leg movements while marching and running: On toes, raising the knees, raising the straight leg.

(3) Marching with two- and four-movement arm exercises, four steps to each movement.

B. *Dancing steps.* (See note, page 26.)

(a) Swing-hop; polka-hop; balance-hop.

(b) Skip-step with foot and leg swings in $\frac{3}{4}$ time; double balance-hop.

(c) Three-step swing-hop; triple balance-hop; balance-hop-turn.

(d) Balance-step with $\frac{1}{4}$ turns; step-turn sideward.

Appropriate trunk and arm movements to be added later.

Games.

(a) *Gymnastic games.*

Three Deep.
Poison.
Jumping Circle.
Rubber Quoits (Grace Hoops).
Catch the Robber.

Ball Games.

Simplified forms of baseball.
Girls and boys, with the hand,
bat a volley ball or a light basket ball.
Throw the medicine ball for height or for distance.
Kick ball.
Pass ball in a circle, also backward over head.

(b) *Team games of low organization.* Rabbits, dodgeball in a circle, chaseball, volley ball (throw over), corner ball, simplified soccer ball, also potato race as a team game, running and hopping races.

(c) *Boys' wrestling games.* Foot in the ring, free hopping (rooster fight), wrestle for the wand, push and pull over the line.

Track and Field Events.

Note. The figures in parentheses under each year show what the best pupils of this age can accomplish.

(a) *Fast running*—sprinting—up to 100 yards.

Minimum requirements: 100 yards. Time in seconds.

	10 yrs.	11 yrs.	12 yrs.	13 yrs.	14 yrs.	15 yrs.
Boys	17 $\frac{1}{2}$ (15 $\frac{1}{2}$)	16 $\frac{1}{2}$ (15 $\frac{1}{2}$)	15 $\frac{2}{5}$ (15)	15 (14 $\frac{2}{5}$)	14 $\frac{1}{2}$ (13 $\frac{3}{5}$)	13 $\frac{2}{5}$ (13)
Girls	17 $\frac{1}{2}$ (15 $\frac{1}{2}$)	16 $\frac{1}{2}$ (15 $\frac{3}{5}$)	16 $\frac{3}{5}$ (15 $\frac{3}{5}$)	16 $\frac{2}{5}$ (15 $\frac{2}{5}$)	16 $\frac{1}{2}$ (15 $\frac{2}{5}$)	16 $\frac{1}{2}$ (15 $\frac{1}{5}$)

(b) *Endurance running* from 6 to 8 minutes. Pupils suffering from short breath or pain in the side step out of the line without further comment. After breathing is normal they again step into line.

(c) *Jumping.*

Minimum requirements in feet and inches.

Standing Broad Jump.

	10 yrs.	11 yrs.	12 yrs.	13 yrs.	14 yrs.	15 yrs.
Boys	4 (5.4)	4.3 (5.10)	4.6 (6.3)	4.9 (6.6)	5.2 (6.10)	5.5 (7.4)
Girls	3.3 (4.9)	3.6 (5)	3.8 (5.3)	3.10 (5.6)	4 (6)	4.1 (6)

Running Broad Jump.

Boys	7 (7.6)	8.3 (9.1)	9.6 (10.8)	11.4 (12.2)	12.6 (13.5)	13.5 (14.7)
Girls	5.10 (6.8)	6.6 (7.8)	7.2 (8.4)	8 (9)	9 (10.8)	9 (11.8)

Running High Jump.

Boys	2.8 (3.2)	2.11 (3.4)	3.1 (3.6)	3.4 (3.9)	3.6 (4.2)	3.9 (4.5)
Girls	2.8 (2.10)	2.9 (3)	2.10 (3.2)	3.2 (3.3)	2.11 (3.1)	2.9 (2.10)

Triple Standing Broad Jump.

Boys	13 (15.9)	14 (16.9)	14.6 (18.7)	15.1 (19)	16.4 (20.7)	18.1 (22.4)
Girls	10.10 (14.2)	12.1 (14.8)	12.5 (15.8)	12.9 (17)	13 (17)	13.10 (17.7)

Running Hop, Step and Jump.

Boys	16.4 (20.5)	18 (23)	18.8 (24.5)	19.9 (26)	21.7 (29)	23 (29.5)
Girls	13.8 (17)	14.6 (18.8)	15.5 (21.4)	15.6 (21)	16.4 (21.2)	16.6 (20)

Girls with a 10-foot start.

(d) *Swimming and skating* should be encouraged.

Apparatus Work.

(See note, page 28.)

Horizontal Ladders, Swinging Rings, Balance Beams, Stall Bars, Long Jumping Rope.

(a) Simple exercises for increasing skill, also strength of arms and of abdominal muscles. Exercises in the hang, hang-stand, support-stand, hang-lying and support-lying.

(b) On the beam, walking forward and backward; momentary support.

(c) In the rope, jumping with $\frac{1}{4}$ turns.

SECOND BOOK, B.

School Grades 7 and 8; Ages 12 to 15 Years.

Tactics.

A. *Moving of the class.* The pupils are arranged in a column of front ranks of twos. Alternate marching and running a specified number of steps. When running, at a given corner successively form fours. Run in place. Halt.

B. *Formation for free exercises.* Open the ranks from the center two steps distance, by marching forward, in succession (4 counts); the even files then one step forward (2 counts; 6 counts in all).

Free Exercises.

In the Seventh Grade the exercises without hand apparatus should often alternate with wand exercises, and in the Eighth Grade with dumb-bell exercises.

The essential exercises of these grades are:

- (a) *Arms:* 1. Raise the straight arms in all directions.
2. Straighten, thrust and strike forward, side-ward, upward and downward, the starting positions being: "Arms bent upward," "Arms bent to thrust," and "Arms bent to strike."
3. Circle arms forward, backward, inward, outward.
- (b) *Legs:* 1. Raise the straight leg in all directions.
2. Place the foot in all directions; stride; lunge.
3. Raise the knee; foot; heel; bend the knees.
- (c) *Trunk:* 1. Lower the trunk forward.
2. Bend the trunk in all directions.
3. Turn the trunk.

New Co-ordinations (Class Aims) for Grades 7 and 8.

(See, also, note, page 26.)

Repeat Previous Co-ordinations.

A. *Combined intersected exercises of three body-parts.* In this co-ordination some of the movements should employ three body-parts.

Example: (Arms bent to thrust) lunge left forward, lower the trunk forward and thrust sideward—1, raise the arms upward—2, lower the arms sideward—3, return to the starting position—4.

Or (2) if *Wands* are used: Raise the arms fore-upward—1, lunge left sideward, bend the trunk right and lower the wand right downward on the right hip—2, reverse—3, return to the starting position—4.

Or (3) if *Dumb-bells* are used: (Arms bent to thrust) lunge left sideward, bend the trunk right and thrust sideward—1, change knee-bend, bend the trunk left and swing the right arm bent overhead, the left behind the back—2, reverse—3, return to the starting position—4.

Steps.

A. *Marching steps.*

(1) Marching in common time; *i. e.*, 135 steps per minute; in fast time; *i. e.*, 150 to 160 steps per minute. Arms swing naturally.

(2) Leg movements while marching and running; on toes, raising the knees, raising the straight leg.

(3) Marching with two- and four-movement arm exercises, four steps to each movement.

B. *Dancing steps.* (See note, page 26.)

(a) Polka-hop with prefixed leg movements; cut; cut-hop.

(b) Mazurka-hop; balance-hop and cut.

(c) Schottische-step; cut and cut-hop either as single or triple; three-step-turn.

(d) Balance-step and swing-hop in alternation.

Appropriate trunk and arm movements to be added later.

Games.

A. *Gymnastic games.*

Poison.	Pass ball over head; also in a circle.
Catch the Robber.	Medicine ball for height or for distance.
Three Deep.	Hurl ball (four-pound medicine ball with a strap handle).
Day and Night.	
Kick Ball.	

(b) *Team games of low organization.* Rabbits, dodgeball, chaseball, battle ball.

Also potato races as a team game, running and hopping races.

(c) *Team games of high organization.* Prisoner's base, captain ball, volley ball, baseball, soccer ball, goalball.

Track and Field Events.

Note. The figures in parentheses under each year show what the best pupils of this age can accomplish.

(a) *Fast running*—sprinting—up to 150 yards.

For minimum requirements see pages 17 and 21.

(b) *Endurance running* from 8 to 10 minutes. Pupils suffering from short breath or pain in the side step out of line without further comment. After breathing is normal they again step into line.

(c) *Jumping.* Standing and running broad jump, running high jump, and hop, step and jump, triple standing broad jump. For minimum requirements see pages 18 and 22.

Where possible low hurdles, also pole vaulting, are two advisable additional events.

(d) To *swimming* and *skating* of the former grades, pupils should be encouraged to add *tramping*.

Apparatus Work.

(See note, page 28:)

Horizontal Ladders, Swinging Rings, Balance Beams, Stall Bars, Long Jumping Rope.

(a) Exercises of skill demanding greater co-ordination, also increased strength of arms and of abdominal muscles. Exercises in the hang, hang-stand, support-stand, hang-lying and support-lying.

(b) On the beam, walking forward, backward, sideward, momentary support, mounts, dismounts, easy vaults.

(c) In the rope, exercises simultaneously by twos, threes and fours, run in and out; $\frac{1}{4}$ and $\frac{1}{2}$ turns after a specified number of jumps.

SPECIAL NOTES.

Free Exercises.

To Increase the Difficulty of Co-ordinations.

When two or more parts of the body are exercised at the same time or in succession, and the difficulty of the exercise is to be increased, the following progression should be adhered to:

1. The easiest combination is had when two parts of the body are moved in the same direction; for example: Place the left foot forward and bend the trunk forward.

2. A more difficult combination is had when two parts of the body are moved in opposite directions; for example: Place the left foot forward and bend the trunk backward.

3. The third degree of difficulty is had when two parts of the body are moved in different directions; for example: Place the left foot forward and bend the trunk sideward.

Further means of increasing the difficulty of execution are:

4. Raising the center of gravity; for example: Place the hands behind the neck; or raise the arms upward.

5. Narrowing the base of support; for example: Raise the heels; or place one foot forward in line with the other; or stand on one foot.

6. Combinations of the above.

Dancing Steps.

In the dancing steps the four principal rhythms grouped respectively under (a), (b), (c) and (d) may be found by employing marching or running steps to get the correct measure of time. For instance, the polka rhythm (a) equals a slow marching step, the mazurka rhythm (b) equals three steps with an emphasis upon the first, the schottische rhythm (c) equals four running steps with a slight emphasis upon the first, and the waltz rhythm (d) equals three fast steps with an emphasis upon the first.

DEEP BREATHING.

If the regular free exercises of a lesson are taken vigorously and a reasonable number of times, deep breathing will be induced. Should an occasion present itself, especially when exercises are taken outdoors, deep breathing, with suitable arm or trunk movements, should be practiced as a separate exercise. In combining free exercises with deep breathing care must be taken to inhale when exercises are performed that raise the chest, and to exhale when the walls of the chest are being compressed. Breathing must never be suppressed during an exercise, as the more vigorous a movement is, the more will deep breathing be necessary.

See that the pupils' mouths are closed while they are exercising or running. If a child cannot breathe through its nose, the school physician should be consulted.

Specific Exercises to Increase Breathing.

1. Inhalation must always take place through the nostrils.
2. Abdominal breathing should be increased.
3. All exercises must be performed slowly, in the rhythm of deep breathing. They always must be performed in the best form.
4. The head always must be kept in line with the trunk, and not pushed or bent forward.
5. When the arms are raised sideward or side-upward they always should be turned, so as to get full supination; *i. e.*, in the sideward raising the palms should be turned upward, so that the thumbs point backward.

Exercise 1: Raise the arms fore-upward and inhale; return.

Exercise 2: Raise the arms side-upward and inhale; return.

Exercise 3: Raise the arms fore-upward and inhale; lower the arms side-downward.

Exercise 4: Raise the arms side-upward and inhale; lower the arms fore-downward.

Exercise 5: Raise the arms forward, move them sideward and inhale; return.

Exercise 6: Bend the arms for thrusting; straighten the arms obliquely side-upward and inhale; return.

Exercise 7: Raise the arms sideward; place them behind the neck and inhale; return.

All foregoing exercises can be combined with a slight backward bending of the upper trunk.

In order to increase the flexibility of the spine and ribs, bending of the trunk, forward, backward, sideward and obliquely should often be performed; also turning of the trunk.

REFERENCE BOOKS.

(Supplementary Reading.)

Tactics: "Tactics of the Individual," also "Tactics of the Rank," E. H. Arnold, published by the author. "School Tactics," W. A. Stecher, published by the author.

Free Exercises: Emil Rath, published by the author. See also "Gymnastic Nomenclature," E. H. Arnold, published by the author.

Steps: "Gymnastic Dancing Steps," Emil Rath, published by the author. "Esthetic Dancing," Emil Rath, published by Barnes & Co.

Games: "Games and Dances," W. A. Stecher, published by J. J. McVey. "Gymnastic Games, Classified," E. H. Arnold, published by the author. "Games," Jessie Bancroft, published by the Mac-Millan Company.

Track and Field Events: W. A. Stecher and assistants, published by J. J. McVey. "Athletics," by Graham & Clark.

Apparatus Work: "For Both Sexes," by Emil Rath, published by the author. "Elementary Apparatus Work," by E. H. Arnold, published by the author. "Code Book of Apparatus Work," by L. Puritz, published by Trübner Company, London.

Groups of all Kinds of Exercises: "German-American Gymnastics," W. A. Stecher, published by Lee & Shepard. See also the files of "Mind and Body," published in Milwaukee.

A CHARACTERIZATION OF GAMES BASED UPON THE DEVELOPMENT OF DIFFERENT AGE GROUPS.

First Age Group—Infancy ; from Birth to 6 Years.

Playful activities, mainly with its mother, are the beginning of the infant's mental and physical development. The mother's play leads the child into the more intricate mental and physical activities of the kindergarten, which, in turn, underlie the educational aims of the school. The characteristics of the plays and games of this period are :

1. Large movement plays in which movement predominates, and which have little mental content.
2. Dramatic plays in which the child imitates the life around him.

Typical games for children 4 to 6 years of age are :

1. Movement plays, such as running and skipping plays and games.
2. Dramatic plays such as the games imitating the activities of the shoemaker, the blacksmith, the carpenter, the washerwoman, etc.

Second Age Group—Childhood ; from 6 to 12 Years.

This is the period of self-finding ; the child begins to feel himself as an individual. Modern life has taken the child from field, forest, stream, flowers and animals, the true environment of childhood, through which he learns so much. City life with its books and reading, as a rule, are distasteful to him. He wants the real active life ; he wants to know things first hand, not out of books.

Typical games of this period, therefore, largely are activities that resemble the primitive outdoor experiences the child should undergo, leading to self-assertion, to an expression of individuality.

This period may be divided into two parts ; *i. e.*, from 6 to 9, and 9 to 12 years.

First Division, 6 to 9 Years.

Children of this age enjoy the following play-forms:

1. Repetition of movements and phrases with much action, typified by good song games; also by games of imitation, like Follow the Leader.

2. Impersonation as shown in games appealing to the imagination, like Cat and Mouse.

3. Simple chasing games, tag games, like the plain Tag, Hand-tag, Squat-tag; or the tag games in circle formation, like Come Along, the Beetle is Out.

The characteristics of these games are:

First. Their short duration; physically the child will not and should not exercise to exhaustion; he has little physical endurance.

Second. They quickly reach their climax; it is impossible for the child to exert himself mentally over a length of time; he has little mental endurance.

Third. They have few rules; the rules generally apply to the selection of the next players.

The typical games of this period appeal strongly to the imagination of the players. They are suited to the immature mental and physical powers of young children. So far as sex is concerned there appears to be no great difference between the likes and dislikes of boys and girls in the choice of games.

Second Division, 9 to 12 Years.

While children of this age are still largely individualistic in their plays and games, their changing interests lead them to prefer activities demanding greater mental and physical effort and, also, endurance. Boys especially begin to revel in games savoring of fighting, predatory and hunting activities. The individual appears to have deep and strong cravings to live a strenuous life, independent of adult influence. Health at this period should be at its best, while reason, true morality, sympathy, love and esthetic enjoyment are but slightly developed.

The play-forms enjoyed most by children of this age are:

1. Those employing all players in active participation, like Day or Night, Blackman, Rabbits, etc.

2. Personal antagonistics (especially by boys), like Stick Wrestling, Pushing and Pulling over a Line, Foot in the Ring, Tug of War, etc.

3. Intricate tag games, like Last Pair Run, Three Deep, Stick-I-Spy; or games of skill, like Leap Frog, Hop Scotch, Duckstone, etc.

The characteristics of games of this period are:

First. Their longer duration, the climax not being reached as soon as in the games that appeal to younger children.

Second. The injection of daring, courage and greater skill in the play-forms.

Third. The beginnings of definite rules regulating even minor activities.

Third Age Group—Early Adolescence; from 12 to 17 Years.

During these years the child is undergoing a great physiologic change. With girls puberty arrives generally between the years of 12 and 15; with boys the time usually is between 15 and 17 years.

Mentally this age brings with it the beginnings of group consciousness, the unfolding man and woman begins to feel the need of companionship.

Like the preceding period, this also may be divided into two parts; *i. e.*, from 12 to 15 and from 15 to 17 years.

First Division, 12 to 15 Years.

The child at this age begins to realize his relation to others, he begins to feel himself a part of a social group. This desire for co-operation shows itself in some of the play-forms. Games in which the individual stands forth most prominently now begin to share their attraction with those demanding some co-operation.

The characteristics of these games are:

First. The banding together of a certain number of players as a team to compete against similar groups.

Second. The team as a whole works like one individual; as a rule there is little division of work, the games being mainly those of low organization, like Dodgeball, Battle ball.

Third. Definite rules regulating all details of the game now appear, carrying with them the introduction of an official, an umpire.

Second Division, 15 to 17 Years.

With boys this is the "storm and stress" period. Girls by this time should be safely grounded as young women. The games offering opportunities for co-operation now have a very strong hold

upon the players, especially upon the boys. Games demanding a greater division of work, even some specialization, are characteristic of this period.

Fourth Age Group—Late Adolescence; from 17 to 21 (24) Years.

This is the age of team games demanding greatest skill with a medium amount of endurance, also closest co-operation and subservience of self for the benefit of the group.

While the games of low organization still appeal to players of this age, games demanding increased skill and an increasing amount of specialization are most attractive.

The characteristic features of these games are:

First. A high demand upon skill, coupled with a medium amount of endurance.

Second. An increased division of labor; *i. e.*, the high organization typical of Football, Baseball, Hockey, etc.

Fifth Age Group—Maturity; from 21 (24) to Full Manhood.

During the first few years of this period games demanding great endurance, as well as the highly organized games of the preceding period hold their sway. After some years, however, a change takes place and a close analysis of the play of adults who are engaged in serious occupation; *i. e.*, earning a livelihood, shows for the most part that it is not play in the sense of the foregoing, but that it is recreation. The characteristic of play indulged in now is that consciously it is undertaken to furnish mental relief from the stress of work, or to give some form of physical work for those engaged in sedentary occupations. As such it consists largely of tramping, swimming, rowing, fishing, riding, driving, and similar forms of playful activities. The regular games of the former period, however, are also enjoyed, but they have lost that element of strenuousness which formerly characterized their playing. They now are played mainly for "the fun of it."

A Characterization of Track and Field Work by Age Groups When Used for Athletic Competition.

Up to the age of 12 years athletic competition in its true sense has no interest for the child.

During the second age group, especially near its end at 12 years, the interest in track and field work, like running specified distances, all forms of jumping, throwing, etc., generally has been increasing. At the end of this period the child is ready for athletic competition in forms of sport suited to his development.

During the third age group; *i. e.*, 12 to 17 years, the boy is ready to take part in athletics. In deciding what to do, it is well to remember the undeveloped child, and to select "groups" of activities rather than single sports, that the growing child may receive all-around development. Specialization at this age is a distinct harm to the boy.

Toward the end of the fourth age group; *i. e.*, from 17 to 21 years, specialization in some sports for which the boy shows special aptitude may be allowed, although "grouped" activities still are of the greatest mental and physical value to him.

In the fifth age group; *i. e.*, over 21 years, a man has arrived at maturity when even extreme specialization cannot harm him greatly. Yet, even at this age, sports complementing another are the better forms of competition.

If it is advisable, after puberty, to encourage girls to take part in athletic competition (even in running short distances, swimming, appropriate forms of throwing, and like forms of unobjectionable sports) must be decided entirely upon the physical fitness of the girl at the time of the contest.

METHODS OF TEACHING.

Free Exercises: All free exercises must first be taken several times as positions; *i. e.*, upon command. After the pupils perform each separate movement of an exercise correctly, the complete exercise must then be taken rhythmically; *i. e.*, "in time." Every exercise must be performed in rhythm a sufficient number of times until the effect sought by this particular exercise has been gained.

Example No. 1. The class is to perform the following exercise:

Hands on hips—(place). Lower the head forward—1; raise the head—2.

The words in *italics* designate the "starting position," *i. e.*, the position from which the exercise is to begin.

First command: Hands on hips—place. This brings the pupils into the starting position for this particular exercise, and they are now ready to begin.

Second command: Lower the head forward—one. The teacher now corrects faulty positions.

Third command: Raise the head—two. The necessary corrections are again made.

The movements are now repeated several times upon command with the express purpose of gaining correct, prompt and vigorous response to the given command.

Now, after the movements are understood, and after the response is good, the exercise must be repeated rhythmically—in time—a goodly number of times, the command being as follows:

Fourth command: In time—begin. Now, count 1—2, 1—2, 1—2, etc., and when ready to stop, 1—halt.

Fifth command: Hands—lower. This brings the pupils back to the fundamental position, and they are now ready to take up the second exercise in like manner.

Note 1. Criticism in all forms of work is best given in a general way while keeping the entire class at work. Avoid, as much as possible, giving individual criticism. Work for class spirit in the matter of promptness, and the individual laggard will soon fall in. Do not make the worst conspicuous by calling attention to it, but make the best popular by at times calling particular attention to exercises well done.

Note 2. Pupils are not to execute an exercise while it is being demonstrated by the teacher, but always by command.

Never allow an exercise to degenerate into an aimless, purposeless drill, but keep the pupils striving toward some definite, stated improvement.

In the following, *Example No. 2*, the method of teaching a more complicated free exercise is described. The class is to perform the following exercise: *Stride left forward, and hands on hips—place.*

Straighten the arms forward—1; return—2; lower the trunk forward—3; return—4.

The words in *italics* designate the starting position, *i. e.*, the position from which the exercise is to begin.

First command: Hands on hips—place.

Second command: Left forward—stride; or combine the placing of hands on hips, with the stride left forward as one movement. The pupils are now in the starting position and are ready to begin.

Third command: Straighten the arms forward—1. Now make your corrections, see that the arms are shoulder-high, that the palms are turned inward, that the chest and the head are held high, etc.

Fourth command: Replace the hands—2. Again make your corrections.

Fifth command: Lower the trunk forward—3. See that the backs are straight and that the lowering is to a good depth, and that the head is in line with the body (not lowered, nor raised).

Sixth command: Raise the trunk—4. Repeat these movements, several times, upon command.

Now, after the separate parts of the exercise have been executed properly the whole exercise must be repeated rhythmically a sufficient number of times.

Seventh command: In time—begin. Now, count—1—2—3—4, 1—2—3—4, etc., and the last time 1—2—3—halt.

To bring the pupils back to the fundamental position the last command will be: Lower the hands, and the left foot—replace.

When exercising “in time” always use as many counts as the exercise has parts. For example, in an exercise with two parts count 1-2, 1-2, etc., not 1-2-3-4-5-6-7-halt; or in an exercise with four parts count 1-2-3-4, etc., not 1-2, 1-2.

Note. In order to shorten commands the following substitutions may be used. When used in a command, “return” means to resume the starting position—that is, the position from which the exercise was begun. The word “reverse” used as the third command in a four-count movement means to reverse the preceding movement, *e. g.*, hands on shoulders and stride left sideward—1; bend the trunk left—2; reverse—3 (*i. e.*, straighten the trunk); return—4 (*i. e.*, lower the arms and replace the left foot).

If a combined exercise, that is, an exercise employing two different parts of the body at the same time, appears too difficult for a class, it is advisable to teach the separate parts singly before attempting the exercise in the prescribed form; *i. e.*, first perform the arm movements in rhythm; then the movements of the other parts of the body, and, lastly, the combined movements.

TRACK AND FIELD METHODS.

In order to have your pupils improve in the track and field events it is necessary to have the schoolyard, playroom or gymnasium arranged for daily practice. This can be done easily by selecting suitable parts of the yard and painting upon the bricks or cement the starting marks, also the minimum requirements (distance) for each age.

For example: Take the standing broad jump. The selected place for practicing this may be in a corner of the yard little used for active play. Mark the "take off" by a line about 1 foot long and 1 inch wide. Then, at the proper places, mark the minimum distance for children of 8 years, of 9 years, etc.

If it is possible, put alongside of this place your marks for the triple standing jump, for the hop, step and jump, for the basket ball far-throw, etc., plainly marking each, that the children may know what the minimum requirements for each age are.

For the practice of running select a side street if your schoolyard is not long enough. Mark off the 50-yard and the 100-yard distance. Then let the pupils know how fast they should be able to cover the distance.

Writing the distances and the time upon the blackboard for each age represented in your room will stimulate many pupils to test their ability whenever an opportunity offers itself. Another, better way, is to have the pupils select two captains for each event, one for the boys and one for the girls, and have these captains supervise the work and also keep a record of the progress made by each pupil.

Then, when having a physical training lesson embracing the practice of any track or field event, it will be comparatively simple to divide your class into at least two groups; *i. e.*, those who have reached the minimum requirements, and those who have not reached these. The first group may be given into the hands of the respective captains for practice (under your supervision) while you take charge of the group that needs special attention.

This general procedure may be followed also in the simpler forms of apparatus work.

MANNER OF EXECUTION.

In order to do most good, a lesson in free exercises must be taught in a live, energetic and spirited manner. Arm exercises generally should be executed in a brisk rhythm, while exercises of the head and trunk should be performed in a slower rhythm, but, nevertheless, with a full, strong contraction of the working muscles. Leg exercises may be either slow or fast (according to the effect sought). Leg exercises often should be used as balance movements; *i. e.*, as positions taken only upon command. The dancing steps should be performed in a rounded, graceful manner, especial attention being given to a "finished" execution. Tactics call for brisk, exact and simultaneous action by the whole class. Apparatus work, track and field exercises always should be performed in good form.

To use the available time to the best advantage always must be the aim of the teacher. In track and field work, also in apparatus work, the teacher must see that as many pupils as possible exercise at the same time. There should be only enough inactivity between the exercises to allow a suitable rest period for those who have exercised.

Teachers should so arrange their class that they easily can see those exercising as well as those resting. The approach to the apparatus, as well as the retreat therefrom, always should be in an orderly but expeditious manner.

COMMANDS.

There are two kinds of commands, the preparatory and the executive. The preparatory command tells the pupils the movement to be performed. A slight pause follows this, giving the children time fully to understand what they are to do. No movement must be allowed during this pause. The executive command now follows, distinctly and sharply, calling for instant vigorous action.

MANNER OF COMMANDING. Example No. 1, using the verb as the executive command:

"Hands on hips—(pause)—place."

"Hands—(pause)—lower."

Example No. 2, using a full sentence to explain the exercise in the preparatory command, and then using a numeral as the executive command:

"Raise the arms forward—(pause)—1."

"Lower the arms—(pause)—2."

Example No. 3 (like No. 2), applied to apparatus work (horizontal ladder):

"Jump to a hang with straight arms—1."

"Bend and straighten the arms—1—2; 1—2."

"Jump to a stand—1."

Note 1. The execution of a movement is governed by the manner in which the command is given. The teacher's voice, therefore, is all-important. Indicate by your voice that you expect and must have accuracy and promptness in the movement. Use a natural light tone, never too loud.

Note 2. As a rule, a slight pause is made between the preparatory and the executive command; if, however, gymnastics is used to shorten reaction time, to train for quick thinking, the executive command should quickly follow the preparatory.

RELIEF EXERCISES.

Recreation Drills: Prolonged sitting, even with most active brain work, will result in an increasing slowness of the blood flow. This is followed by decreased power of attention and increased restlessness. The recreation drills on pages 40 and 41 are active means for combating these evils. A few minutes devoted to these drills is time well invested, resulting in increased mental freshness. Age of pupils, lack of ventilation and other school conditions may make it profitable for the teacher to use these relief measures every hour, or oftener. The time devoted to these recreation drills must not be deducted from the time to be given to the formal lessons. These drills are composed mainly of exercises that vigorously work the large muscle-masses of the body. They are intended to counteract the detrimental effects of prolonged sitting or stooping. The selections are such that the exercises may be taken in any classroom. The windows must be opened, and pupils standing near windows should face these. If a classroom is favorably located a run of a minute's duration in the school yard—no attempt being made to keep step—will also give the desired relief, with the added benefit of more fresh air and changed surroundings.

Arranging a Class for Relief Exercises: At the command, "*Class, sit—erect,*" the pupils will sit erect. At the command, "*Class—stand,*" the pupils rise quickly and quietly, and stand in the middle of the aisles. In order to get the space necessary for exercising, the command is given, "*Take distance—march.*" The pupils hereupon raise their arms forward and move forward or backward until they have sufficient room. In order that pupils may have ample distance it is advisable to use all the free space at the front and back of the room. At the close of the exercises the pupils return to their places in the aisles at the command, "*To your desks—march.*" The command, "*Class—be seated,*" brings all into their regular seats.

Note. Teachers must appoint window monitors, who will, at the beginning of the exercises, open the windows for ventilation, and, later, close them.

VENTILATION.

Sufficient ventilation under all conditions is still an unsolved problem, even in most modern schools. In the greater number of school rooms the quickest and most effective way of getting fresh air is to open the windows as often as conditions demand it. Naturally, outdoor temperature will determine the time and the degree of this manner of ventilation. Manual work, singing, etc., increase respiration, and call for an increase of fresh air. Gymnastics does this to a still greater degree. Under no circumstances, therefore, should physical exercises of any kind be performed in a room that does not give the pupils a greatly increased supply of fresh air.

RECREATION DRILLS.

Do not waste time with needless corrections during these drills. Their sole object is to stretch the cramped body, and to equalize and increase the circulation of the blood.

Open the windows as wide as the weather permits. Pupils standing near the windows should face these while exercising.

Set I.

1. *Hands on hips—place.* Alternately raise the knees forward, thirty to forty times. This must be a quick movement, a sort of slow running on place.

2. *Hands—clinch.* Vigorously swing the arms fore-upward, eight to sixteen times.

3. *Hands on hips—place.* Bend the trunk fore-downward, eight to ten times.

4. Breathe deeply, four to six times, raising the arms fore-upward.

Set II.

1. *Hands on hips—place.* Bend the knees, eight to sixteen times.

2. *Hands—clinch.* Bend the trunk left and place the right fist under the right shoulder—1; the same movement to the opposite side—2; eight to sixteen times. This must be a continuous swinging movement.

3. *Arms to thrust—bend.* Thrust alternately upward and downward, eight to sixteen times.

4. *Hands on hips—place.* Breathe deeply four to six times, raising the heels during the inhalation.

Set III.

1. *Hands on hips—place.* Bend the trunk alternately forward and backward, eight to ten times.

2. *Hands at sides.* Swing the arms fore-upward, eight to sixteen times.

3. *Place hands on shoulders, and left forward—stride.* Turn the trunk left and right, eight to ten times.

4. *Arms upward—raise.* Swing the arms fore-down and upward, at the same time bending the trunk forward and backward, about ten times.

Set IV.

1. *Hands—clinch.* Swing the arms fore-upward and lower them side-downward, pressing them back as far as possible, eight to sixteen times.

2. *Hands on hips—place.* Continuously bend the trunk forward and backward (a swinging movement), eight to ten times.

3. *Raise the arms sideward and hands—clinch.* Turn the trunk left and right, as a continuous movement, eight to twelve times.

4. *Raise the arms upward, and left forward—stride.* Swing the arms fore-down and upward at the same time bending the trunk forward and backward, eight to ten times.

Set V.

1. *Hands on hips—place.* Bend the trunk obliquely forward left and right, eight to ten times.

2. *Hands—clinch.* Vigorously swing the arms fore-upward with raising the heels, and return to the starting position, eight to sixteen times.

3. *Hands on shoulders—place.* Bend the trunk left and right sideward, eight to ten times.

4. *Hands on hips—place.* Bend and straighten the knees, eight to sixteen times.

Set VI.

1. *Arms to thrust—bend.* Thrust alternately upward and sideward, eight to sixteen times.

2. *Hands on hips—place.* Bend the trunk fore-downward and straighten the arms downward, eight to ten times.

3. *Grasp the desk.* Swing the left leg forward and backward, eight to ten times. Change the hold and repeat with the right leg.

4. *Arms forward—bend.* Fling the arms sideward, eight to twelve times.

EXERCISES IN JUMPING AND HOPPING.

Where it is possible, most certainly where the exercises are performed in the yards, several jumping exercises should be given in every gymnastic lesson. The following exercises will give the class teacher an ample list to select from:

Jumping on Both Feet.

The hands may be placed on the hips. The movements are to be performed from eight to sixteen times.

1. Jump on place.
2. Jump to a side-stride—1; position (feet closed)—2.
3. Jump to a side-stride—1; jump to position with crossed legs—2.
4. Jump to a side-stride—1; crossed legs—2; side-stride—3; position—4.
5. Jump to a cross-stride, left forward—1; position—2.
6. Exercise 5 right forward.
7. Jump to a cross-stride, left forward—1; right forward—2; left forward—3; position—4.

These exercises may be varied and made more difficult by introducing quarter and half-turns after every four or two jumps.

Hopping (on One Foot).

The knuckles may be placed on the hips.

1. Hop on the left foot, the sole of the right foot placed against the calf of the left leg.
2. The same exercise right.
3. Hop twice on the left foot 1—2; then twice on the right 3—4 (position of leg as in 1).
4. Hop on the left foot, slightly raising the right leg sideward.
5. The same exercise right.
6. Combine exercises 4 and 5, changing from foot to foot on each hop.
7. Combine exercises 3 and 6; *i. e.*, hop twice on the left foot, placing the right foot against the left leg 1—2; the same exercise right 3—4; then hop left, right, left and right raising the opposite leg sideward 5—8.

8. Hop four times left, on the first hop raise the right heel (against the calf of the left leg); on the second straighten the right leg forward; on the third resume the first position; on the fourth close the feet.

9. The same exercise hopping right.

10. The same exercise alternating left and right.

11. As exercises 8, 9 and 10, but placing the right foot forward on the first and third counts and raising the leg on the second.

Jumping Upward, from Both Feet.

1. Raise the arms forward and raise the heels—1; swing the arms down and backward, bending the knees—2; swing the arms fore-upward, jumping upward—3; swing the arms down and backward, bending the knees—4; straighten the legs, lower the heels and arms—5. (The fourth count must immediately follow the third.)

2. As exercise 1, side-striding during the jump; also with cross-striding, crossing the legs, raising the knees, or raising the feet backward during the jump.

These jumps may also be taken with quarter or half-turns.

Jumping Forward, from Both Feet

3. As exercise 1 of jumping forward, except that the jump and arm-swing shall be forward.

The forward jump may be taken with all the leg movements enumerated above, also with quarter and half-turns.

4. Two, three or more standing jumps forward in quick succession.

Jumping Forward, from One Foot.

5. Step left forward, raising the arms backward—1; jump forward swinging the arms and right leg forward—2; knee-bend, the arms remaining forward—3; straighten the legs, lower the heels and arms—4. (The third count must immediately follow the second.)

6. The same exercise stepping right forward.

7. Three quick steps forward and a jump. Practice this, beginning and jumping left as well as right.

8. As exercise 7, with quarter and half-turns. When jumping off the left foot, the turn is left, and *vice versa*.



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